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Massive Upper Gastrointestinal Bleeding Secondary to Duodenal Metastasis of Transitional Cell Carcinoma of the Urinary Bladder

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Key Words

Upper gastrointestinal bleeding · Transitional cell carcinoma of the urinary bladder · Duodenal metastasis · Oropharyngeal metastasis

Abstract

Acute upper gastrointestinal (UGI) bleeding is a common problem in our clinical practice and is often due to peptic ulcer diseases. Occasionally, malignancy may be implicated in these situations. Here we report a rare case of UGI bleeding secondary to metastatic transitional cell carcinoma (TCC) of the urinary bladder. A 62-year-old man with a history of stage IIIb TCC of the urinary bladder presented with hematemesis. Endoscopy showed a large tumor in the second stage of the duodenum that occupied 40% of the duodenal circumference, over 7 cm in length. Biopsies revealed a poorly differentiated malignant neoplasm consistent with metastasis from urothelial carcinoma that was identical to the previous surgical specimen of the urinary bladder. He was treated with supportive therapy and intravenous proton pump inhibitor and was discharged home 2 weeks later. Two weeks after discharge, the patient returned to the hospital with a painful swelling of the floor of his mouth. Biopsy again showed the same cancer type. He had unremitting bleeding from his mouth requiring multiple transfusions and a course of palliative radiation therapy. He progressively deteriorated in his cardiopulmonary and neurological functions and expired with cardiopulmonary arrest one month later.

Introduction

Acute upper gastrointestinal (UGI) bleeding is a common problem in our clinical practice and is often due to peptic ulcer diseases accounting for about 60% of cases [1]. Gastroduodenal erosions and varices account for another 20% of cases [1]. Rarely, malignancy may be implicated in these situations [1].

Urinary bladder cancer is the ninth most common cancer worldwide [2]. Over 90% of bladder cancers are transitional cell carcinoma (TCC) [3]. Approximately 70% of newly diagnosed TCCs are superficial tumors, of which 50–70% will recur after endoscopic transurethral resection and 10–20% will progress to invasive disease [3]. Local invasion through direct extension of the tumor is the most common mechanism of spread. However, 5% of patients with well or moderately differentiated superficial carcinomas and 20% of patients with high-grade superficial disease manifest vascular or lymphatic spread [4]. The most common sites of clinically diagnosed metastasis are pelvic lymph nodes, lung, bone, and liver [5, 6]. Although oral and intestinal metastases of TCC have been previously reported [5–9], we present here a rare case of massive UGI bleeding secondary to duodenal and oropharyngeal metastases of TCC of the urinary bladder.

Case Report

A 62-year-old Italian man presented to the emergency room with hematemesis. Initial laboratory results revealed an elevated INR (1.9), anemia (hemoglobin = 70 g/l, baseline of 150 g/l). His significant past medical history included stage IIIb TCC of the urinary bladder previously treated with partial cystectomy with lymph node dissection and adjuvant chemotherapy (gemcitabine and carboplatin) 2 years previously, complicated by pulmonary embolism treated with long-term coumadin, and a subsequent local recurrence in the right iliac region treated with radiation 1 year before.

An initial endoscopy showed a large bleeding mass at the second stage of the duodenum. Visualization of the lesion was difficult due to bleeding, and the patient was transferred to the intensive care unit for resuscitation and reversal of anti-coagulation. He responded to fluid administration, intravenous proton pump inhibitor and transfusion and remained hemodynamically stable. A repeat endoscopy was performed 4 days later. A large tumor occupying 40% of the circumference and 7 cm in length in the second stage of the duodenum without active bleeding was clearly seen and multiple biopsies were taken. The biopsies showed a poorly differentiated malignant neoplasm consistent with metastasis from urothelial carcinoma, which was essentially identical to the previous surgical specimen obtained from the urinary bladder. The patient was discharged home 2 weeks later with a follow-up appointment with his oncologist.

Two weeks later, the patient returned to the hospital complaining of a painful swelling of the floor of his mouth. Biopsy showed again the same type of cancer as in the duodenum. He had unremitting bleeding from his mouth requiring multiple transfusions. While in hospital he received a course of palliative radiation therapy for the control of bleeding. He progressively deteriorated in cardiopulmonary and neurological function and expired with cardiopulmonary arrest one month later after establishing an agreement on comfort care only.

Discussion

Intestinal metastases of TCC of the urinary bladder are rarely of clinical significance. Most of them are autopsy or intraoperative findings. Two large independent autopsy case series showed that intestinal metastasis could be found in as many as 13% of patients with TCC [5, 6]. Most of these metastases were not diagnosed clinically. Lehmann et al. however found only 2.3% of patients with intestinal metastases intraoperatively [7]. Hoshi et al. reported a case of intestinal perforation secondary to ileal metastasis of TCC [10]. Langenstroer et al. [11] and Ito et al. [12] both reported cases of bowel obstruction secondary to annular compression of the rectum. Girotra and Jani have recently reported a case of occult UGI bleeding secondary to duodenal metastasis of TCC of the urinary bladder [9]. In contrast to their case, our patient had a significant hemorrhage requiring blood transfusion, likely secondary to concurrent anti-coagulation therapy. Moreover,

our patient had massive oropharyngeal bleeding from his metastatic disease requiring blood transfusion and palliative radiation therapy.

Metastasis of renal cell carcinoma and testicular neoplasms is a commonly reported cause for UGI bleeding secondary to urological malignancies in the literature [13, 14]. To our knowledge, UGI bleeding from duodenal metastasis of TCC originating from urinary bladder is rarely reported. These rare hemorrhagic duodenal metastases lead us to consider metastatic disease as an important differential diagnosis of bleeding duodenal masses, especially in patients with a history of urological malignancies.

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